

**REMARKS**

Reconsideration of this application, as amended is respectfully requested.

Claims 1, 2, 4, 6-7, 9, 11, 14, 16, 21-22, 24, 26, 29, 42, and 49 have been amended.

Claim 48 is cancelled. New claims 50-51 are added. Support for this amendment is found throughout the specification and drawings, for example, at page 8, lines 9-29; and Figures 3 through 15. No new matter has been added. Claims 31-41 directed at multicellular stents have been previously withdrawn due to a restriction requirement. Applicants request the Examiner reconsider this restriction requirement upon allowance of the claims.

**1. Jayaraman '245 Neither Anticipates Nor Renders Obvious**

Claims 1-2, 4, 6-7, 11-12, 14, 16-17, 19, 42-47 have been rejected as being anticipated by or, in the alternative, obvious over U.S. 6, 162, 245 to Jayaraman (Jayaraman '245). Applicants respectfully disagree with this rejection. As explained hereafter, Applicants respectfully submit that the pending claims as presently amended are neither anticipated nor rendered obvious by Jayaraman '245.

The Jayaraman reference does not teach or suggest the invention as recited in claims 1, 2, 4, and 6-7. In particular, the Jayaraman '245 reference fails to disclose loops in said first, second and third loop containing sections being disposed and adapted to cooperate so that components of said third loop containing section contribute to the cell's elongating or shortening when the stent is flexed in a vessel. The "3<sup>rd</sup> loop containing section/2<sup>nd</sup> circumferential band of a 2<sup>nd</sup> frequency," as characterized by the Examiner in his Official Communication actually contributes more rigidity to the stent and is less flexible than the low frequency loops. The higher

frequency sections of the above reference, as seen in Fig. 30, are more rigid than the lower frequency sections because there is more material per unit area of stent in the high frequency sections (See Fig. 30, Jayaraman). More rigidity equates to an inability of these sections to contribute to the cell's elongating or shortening when flexed, for the simple reason that sections with less metal per unit area are more flexible and will contribute more to a cell's elongation, shortening and/or deformation. Nothing in the Jayaraman reference teaches or suggests that the higher frequency sections can provide the flexibility to the structure. Thus, Figure 30 of the Jayaraman reference does not teach or suggest the requirements of these claims.

Regarding claims 11-12, 16-17, and 19, these claims require the low frequency bands "to be 180° out of phase with each other along a longitudinal axis of the stent." Jayaraman, as shown in Figure 30, does not teach or suggest this configuration. In Figure 30, a vertical line in the center of the drawing demonstrates this structural distinction. The Jayaraman reference has no suggestion to modify the structure shown in Figure 30 to be 180° out of phase with each other as the above claims recite. Thus, Jayaraman does not teach or suggest what is claimed. Reconsideration and withdrawal of the rejections is respectfully requested.

## **2. Brown Neither Anticipates Nor Renders Obvious**

Claims 21-22, 24 and 49 have been rejected as being anticipated or in the alternative obvious over Brown et. al. (WO 00/30563 or US 20022007212 A1). Applicants respectfully disagree with this rejection.

Brown does not teach or suggest odd vertical meanders that are 180° out of phase with adjacent even vertical meanders along the longitudinal axis of the stent.

As shown in Brown and the Figure on page 5 of the present Office Action, the dotted line denotes an axis. The Figure presented by the Examiner on page 5 of the present action clearly shows that these patterns are not 180° out of phase with each other. Claims 21-22, 24 and 49 require the first meander patterns to be 180° out of phase odd and even meanders along the longitudinal axis of the stent. The loops in Brown do not meet this limitation. Furthermore, there is no suggestion in Brown to modify their structures to reach the invention as recited in claims 21-22, 24, & 49. For at least these reasons, reconsideration and withdrawal of the rejections is respectfully requested.

### **3. Berry Neither Anticipates Nor Renders Obvious**

Claims 26-27 and 29 have been rejected as being anticipated by or rendered obvious over Berry (U.S. 6,231,598). Applicants respectfully disagree with these rejections. Applicants respectfully submit that the pending claims are not anticipated or rendered obvious by Berry for at least the following reasons.

The Berry reference does not teach or suggest the invention recited in claims 26-27 and 29. The stent described in Berry is not an expandable stent *consisting essentially of* a plurality of enclosed flexible spaces. Instead, the Berry reference describes a stent wherein every other row of cells are rigid and non-flexible; i.e., those containing the rigid connector. Berry neither teaches nor suggests a stent which does not have a rigid connector component as a substantial structural part of the stent. For this reason, the Berry reference does not anticipate or render claims 26-27 or 29 obvious. Reconsideration and withdrawal is respectfully requested.

**4. Jayaraman in View of Yang**

Claims 3, 5, 13, 15, 18, and 20 have been rejected as obvious under 35 U.S.C. §103(a) over Jayaraman in view of Yang (U.S. 6, 120, 847). The Examiner himself stated that Jayaraman does not disclose a stent coated with medicine for treatment purpose. However, the Examiner then alleges that it would have been obvious to provide a medicine coating to Jayaraman that is disclosed in Yang to achieve the characteristics as recited in claims 3, 5, 13, 15, 18, & 20. Applicants respectfully disagree with this rejection.

As discussed above, Jayaraman does not teach or suggest what is claimed in the above claims. Jayaraman does not teach or suggest a stent wherein the high frequency loops contribute more to elongating, shortening and deformation than the low frequency loops. Jayaraman does not teach or suggest a stent having loop containing sections or loops are 180° out of phase with adjacent first and second loop containing sections along the longitudinal axis of the stent for the benefits recited in the claims. Without these basic structural/functional elements, one skilled in the art could not reach what is claimed. Yang does not remedy these deficiencies.

The combination of Jayaraman with Yang does not render obvious a stent having a coating as recited in the above claims. One skilled in the art reading these references would not be led to the instant invention, because neither Jayaraman nor Yang teach or suggest the basic stent design of the present invention.

Yang discloses surface treatments that eliminate surface imperfections on a medical device having a drug release coating. Yang eliminates these imperfections by

a dipping or spraying process using a solvent carrier to incorporate a therapeutic agent within a polymer matrix. In contrast, claims 3, 5, 13, 15, 18 and 20 provide a structure which more evenly contacts a vessel wall so as to provide an even distribution of medicine to a vessel wall. Nothing in Yang alone or in combination with Jayaraman teaches or suggests such a concept. Yang does not teach or suggest using the stent design, as the applicants claim in the above claims, to provide for a more even dose being applied to the inside wall of a bodily lumen.

Because Jayaraman in view of Yang does not teach or suggest the claimed stent structure or the use of stent structure to provide an even distribution of medicine to a vessel wall, applicants assert that these references do not anticipate or render claims 3, 5, 13, 15, 18 and 20 obvious. Reconsideration and withdrawal of the rejections is respectfully requested.

#### **5. Brown in View of Yang**

Claims 23 and 25 have been rejected as being obvious under 35 U.S.C. §103(a) over Brown in view of Yang. Applicants respectfully disagree with this rejection.

As discussed in detail above, Brown does not teach or suggest a stent structure having odd and even first meander patterns which are 180° out of phase with each other. Therefore the structural limitations of claims 23 and 25 are not satisfied.

Brown, when combined with Yang does not make claims 23 and 25 obvious. Yang describes using a surface treatment to provide a smooth surface for medicine. Yang does not teach or suggest using the stent structure itself to accomplish uniform dosage application to the vessel wall. Therefore, neither Brown alone or in combination with Yang teaches or suggests a stent structure as claimed or the use of a structure to

produce a more uniform distribution of medicine on a vessel wall. Reconsideration and withdrawal of the rejection under 35 U.S.C. §103 is respectfully requested.

**6. Berry in View of Yang**

Claims 28 and 30 have been rejected as obvious under 35 U.S.C. §103(a) over Berry in view of Yang. Applicants respectfully disagree with this rejection.

As discussed above, Berry does not teach or suggest a stent consisting essentially of a plurality of enclosed flexible spaces as claimed, but rather incorporates many non-flexible spaces having straight rigid connectors. As a result, Berry does not teach or suggest what is recited in claims 28 and 30. Further, Yang does not remedy the deficiencies of Berry. Yang describes a chemical surface treatment to provide a smooth surface for medicine, and adds nothing to the description of Berry as it relates to stent structure. Berry in combination with Yang does not teach or suggest the invention recited in claims 28 and 30 because neither reference alone or in combination describes a stent structure consisting essentially of a plurality of enclosed flexible spaces where the uniform structure of the stent provides a more even dose of medicine when medicine is applied to the stent. For these reasons, applicants respectfully request reconsideration and withdrawal of this rejection.

**CONCLUSION**

Based on the foregoing amendment and remarks, applicants respectfully submit that the claims as currently presented are patentable and in condition for allowance.

If any issues remain, or if the Examiner has any suggestions for expediting allowance of this application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.


Favorable consideration is respectfully requested.

**AUTHORIZATION**

The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment to Deposit Account No. 13-4500, Order No. 4303-4005. If there are any additional petitions required with these additional fees they are hereby made. **A DUPLICATE OF THIS DOCUMENT IS ATTACHED.**

Respectfully submitted,  
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